

A Demonstration of the Public Interface to Real-Time GOES Solar X-ray Imager Data.

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The GOES Space Environment Monitor (SEM) has been providing continuous monitoring of the near-space environment since 1974. This archive of solar X-ray flux, energetic particles, and magnetic field data is a unique and invaluable asset for analyzing space weather affects on technology.

With the launch of GOES-12 on July 23, 2001, NOAA added a new instrument for studying space weather – Solar X-ray imager (SXI). SXI will produce one full disk image each minute, and each will be made available to the public within seconds of observation.

NOAA's Space Environment Center (SEC) receives the telemetry stream directly from SXI, processes the data, and sends them in real time to the National Geophysical Data Center (NGDC), where they are archived and published via a public interface on the World Wide Web (WWW). The exposure settings follow a sequence that is optimized to observe coronal structures, active regions, and solar flares.

The public interface allows users to browse any image in the archive, generate a summary report of data holdings, search for images matching a combination of criteria, interactively download selected images, and view movie sequences spanning the entire archive.

The SXI archive currently contains approximately 100,000 images collected during the post launch test interval from July – December 2001. SXI has been in storage since that time, but will be reactivated in January 2003.